

### REMARKS

Claim 37 is amended. No claims have been added or cancelled. Hence, Claims 23-24, 26-29 and 37-39 are pending in this application.

### **ALLOWED CLAIMS**

The Examiner is thanked for the allowance of Claims 23, 24, and 26-29.

### **SUMMARY OF REJECTIONS**

Claims 37-39 were rejected under 35 U.S.C. § 102(b) over U.S. Patent 6,324,533 (hereinafter “*Agrawal*”).

### **SUMMARY OF EXAMINER INTERVIEW**

On July 22, 2008, a telephone interview was conducted between the Examiner (Mr. Sangwoo Ahn) and representatives of the Applicants (Brian Hickman and Yiping Liao). During the interview, the representatives of the Applicants discussed the feature of independent Claim 37 in which an occurrence counting technique is selected based on conditions existing in a computing environment in which a frequent itemset operation is to be performed. Furthermore, the representatives of the Applicants also discussed how *Agrawal* does not teach this feature because *Agrawal* teaches the selection of an occurrence counting technique based on data characteristics of the data involved in the operation itself, not any pre-existing conditions in the computing environment. Finally, the representatives of the Applicants suggested amending independent Claim 37 to further emphasize this feature.

Examiner Ahn acknowledged the explanations and arguments put forth by the representatives of the Applicants, and requested that a response to the Office Action be submitted in full.

Applicants hereby submit a full response to the Office Action. In addition, Claim 37 has been amended to more fully emphasize the selection of an occurrence counting technique based on conditions existing in a computing environment before the performance of the frequent itemset operation.

### **Claim 37 Is Patentable Over *Agrawal***

Independent Claim 37 recites, with emphasis added:

A method comprising performing a machine-executed operation involving instructions, wherein the machine-executed operation is at least one of:  
A) sending said instructions over transmission media;  
B) receiving said instructions over transmission media;  
C) storing said instructions onto a machine-readable storage medium; and  
D) executing the instructions;  
wherein said instructions are instructions which, when executed by one or more processors, cause the performance of a frequent itemset operation by performing the steps of:  
dynamically selecting which occurrence counting technique to use from a plurality of available occurrence counting techniques **based on conditions existing before the frequent itemset operation is performed in a computing environment in which the frequent itemset operation is to be performed**,  
wherein the conditions include workload of a computer system in which the frequent itemset operation is to be performed, and an amount of volatile memory available to store a candidate prefix tree; and  
during said frequent itemset operation, using said selected occurrence counting technique to count occurrences of at least one combination to determine whether said at least one combination satisfies frequency criteria associated with said frequent itemset operation.

The elements in Claim 37 which are emphasized above are not taught, suggested, or disclosed in *Agrawal*.

During a frequent itemset operation, an occurrence counting technique is used. A number of different occurrence counting techniques are available and may be used to perform the frequent itemset operation. Also, the frequent itemset operation is performed in a certain computing environment.

According to the method recited in Claim 37, an occurrence counting technique is selected, from a plurality of available occurrence counting techniques, to be used in a frequent itemset operation. The selection of the occurrence counting technique is based on conditions existing in the computing environment in which the frequent itemset operation is to be performed, before the frequent itemset operation is actually performed. One condition may be the workload of the computer system in which the frequent itemset operation is to be performed. For example, occurrence counting technique A may be selected if the workload of the computer system is high, while occurrence counting technique B may be selected if the workload of the computer system is low.

*Agrawal* does not teach “dynamically selecting which occurrence counting technique to use from a plurality of available occurrence counting techniques based on conditions existing before the frequent itemset operation is performed in a computing environment in which the frequent itemset operation is to be performed”. In contrast, *Agrawal* teaches selecting an occurrence counting technique based on the “data characteristics” of an operation (*Agrawal* col. 11 ln. 37-40). These “data characteristics”, however, have no relationship with existing conditions in a computing environment at the time the occurrence counting technique is selected.

Even if the data characteristics of the operation eventually affects the conditions of the computing environment during the performance of the frequent itemset operation, these data characteristics cannot affect the conditions of the computing environment before the frequent itemset operation is actually performed. For example, the data characteristics may be such that the performance of the frequent itemset operation results in a high workload for the computing environment. However, these data characteristics do not affect what workload is experienced by the computing environment before the frequent itemset operation is performed.

As such, selecting a technique based on the “data characteristics” of an operation does not disclose the step of disclose “dynamically selecting which occurrence counting technique to use ... based on conditions existing in a computing environment before the frequent itemset operation is performed”.

Since at least one element is not disclosed, taught, or suggested by *Agrawal*, it is respectfully submitted that Claim 37 is patentable over the cited art and is in condition for allowance.

Claims 38-39 depends from Claim 37, and therefore, include all of the limitations of Claim 37. It is therefore respectfully submitted that Claims 38-39 is patentable over the cited art for at least the reasons set forth herein with respect to Claim 37.

**CONCLUSION**

It is respectfully submitted that all of the pending claims are in condition for allowance and the issuance of a notice of allowance is respectfully requested. If there are any additional charges, please charge them to Deposit Account No. 50-1302.

The Examiner is invited to contact the undersigned by telephone if the Examiner believes that such contact would be helpful in furthering the prosecution of this application.

Respectfully submitted,

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